

REMARKS

I. Status of the Claims

Claims 1-58 are pending in this Application. Claims 4, 6-11, 21-39 and 48-58 were withdrawn from consideration by the Examiner. However, Applicants again request that the Examiner expand her search to a reasonable number of non-elected species after the elected species is found to be allowable. M.P.E.P. § 803.02.

Claim 20 was amended to replace the word "fabric" with "reinforced laminate." Such an amendment brings this claim into agreement with claim 19, from which it depends. Accordingly, no new matter has been introduced by the amendment.

II. Information Disclosure Statement

Applicants thank the Examiner for attaching to the Office Action dated May 6, 2003, initialed copies of the Forms PTO-1449 indicating that the documents submitted in the Information Disclosure Statement filed April 2, 2001, were considered.

III. Claim Objection

Applicants respectfully submit that the objection to claim 20 set forth on page 2 of the Office Action has been rendered moot by the foregoing amendment.

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IV. Rejection Under 35 U.S.C. §103(a) over Kato in view of Nagamine

Claims 1, 40, 18, and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication No. 3-115,332 ("Kato") in view of Japanese Patent Publication No. 1-249333 ("Nagamine") for reasons discussed at pages 2-3 of the Office Action. Applicants respectfully traverse this rejection for at least the reasons that follow.

To establish a prima facie case of obviousness over a combination of references, the Examiner "bears the initial burden of factually supporting any prima facie conclusion of obviousness." *Cf. In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Specifically, the Examiner must prove such a desire to combine references with "substantial evidence" that is a result of a "thorough and searching" factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002). The Federal Circuit has on numerous occasions states that to establish a prima facie case of obviousness an Examiner must show that the references, taken alone or in combination, (1) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention; (2) would have provided one of ordinary skill with a reasonable expectation of success in so making; and (3) teach all the present claim limitations. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)); see also M.P.E.P. §2143. "Both the suggestion and the reasonable expectation of success must be found in the prior art reference, not in the applicant's disclosure." *In re Vaeck* at 1442 (Emphasis added.).

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A. Claims 1 and 40

Claims 1 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato in view of Nagamine for reasons discussed at pages 2-3 of the Office Action. Specifically, the Examiner states that “when considered as a whole, the combined teachings of Kato and Nagamine would have rendered obvious the invention as claimed in claims 1 . . . and 40.” Office Action at 3. However, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness because the Examiner has not shown that the cited prior art references, taken alone or in combination, (1) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention and (2) would have provided one of ordinary skill with a reasonable expectation of success in so making.

1. *There is no suggestion or motivation to combine Kato and Nagamine*

The Examiner has not demonstrated a suggestion or motivation for combining the teachings of Kato with the teachings of Nagamine. Examiners have a duty to make explicit factual findings as evidence of a motivation to combine references. *See In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Indeed, these factual findings must be “clear and particular.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). In the present case, the Examiner has provided no such evidence.

Neither Kato nor Nagamine teach or even remotely suggest a motivation to combine their teachings. In particular, Kato is drawn to a method of production of electrolytic corrosion-resistant prepregs that may be utilized in the production of electrolytic corrosion-resistant laminates and printed-wiring boards. Kato at 4. Kato

describes this method by stating "that the electrolytic corrosion-resistance effect of the present invention is remarkable." Kato further praises the advantages of this method: "[T]he present invention not only provides excellent electrolytic corrosion resistance but is also promising in terms of manufacturing cost." Kato at 8. Having read Kato's glowing reports of his invention's advantages, a person of ordinary skill in the art would hardly have attempted to improve on his method's allegedly superior properties.

Furthermore, nothing in Kato asserts or even implies that a sizing agent was utilized in the creation of the glass fabric. On this particular point, Kato is silent. This absence of any discussion of sizing agents, combined with the cited advantages for Kato's invention, clearly would not have suggested or motivated an ordinarily-skilled artisan to coat a glass fabric with a resin-compatible sizing agent as implied by the Examiner.

Just as Kato does not teach or suggest a motivation to combine, such a teaching is also lacking in Nagamine. The Federal Circuit has held a prior art reference must be considered in its entirety, and one may not "disregard[] disclosures in the references that diverge from and teach away from the invention at hand." *W.L. Gore & Assocs., Inc., v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983); see also *Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986). Thus, the Examiner must consider the entire disclosure of Nagamine, including those portions that are inconsistent with his asserted position. See *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) ("a rejection cannot be predicated on the mere identification in [a prior art reference] of individual components of claimed limitations").

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Specifically, in Kato the usage requirements of the non-degreased sizing agent were not discussed, and, moreover, no mention of the sizing agent being resin- or matrix-compatible is cited. Moreover, every single example in Nagamine utilized a glass cloth with a sizing material that required degreasing prior to physical test of the cloth or impregnation of the cloth with a resin material. Furthermore, Nagamine's invention works perfectly well with its degreased glass cloth and its disclosure provides no indication to one of ordinary skill in the art that this method should be replaced. Collectively, these factors, in effect, teach away from the use of non-degreased sizing agents and, consequently, away from the inclusion of non-degreased sizing agents in Nagamine. See M.P.E.P. § 2141.02 ("A prior art reference must be considered in its entirety, i.e., as a whole including portions that would lead away from the claimed invention.") (Emphasis added.); *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000).

Applicants respectfully submit that neither Kato nor Nagamine teaches or even remotely suggests a motivation to combine selected teachings taken out of context of each patent as a whole. M.P.E.P. § 2143.01; *cf. In re Rouffet*, 149 F.3d at 1357 ("rejecting patents solely by finding prior art corollaries for the claimed elements . . . would be an illogical and inappropriate process by which to determine patentability") (quotation omitted). The law requires "clear and particular evidence" of a motivation to combine but the Examiner's only statement in this regard is that mention of a degreased sizing agent in Nagamine "would have provided direction as well as suggestion to the skilled artisan." Office Action at 3. This broad and ambiguous statement is hardly "clear and particular evidence" of a motivation to add components to Kato, particularly given that Kato provides no mention of sizing agents, degreased or non-degreased.

Thus, the Examiner has provided no evidence to support the alleged motivation to combine the cited references. Accordingly, the rejection should be withdrawn for this reason alone.

2. *There is no evidence of a reasonable expectation of success*

In addition to showing a motivation to combine the asserted references, the Examiner must show why a person of ordinary skill in the art would have had a reasonable expectation of success when making the combination. See, e.g., M.P.E.P. § 2143.02.

In the present case, the Examiner has not presented evidence that the teachings of Kato and Nagamine, singly or jointly, would have provided one of ordinary skill in the art with a reasonable expectation of success in making the present invention. Rather, the Examiner inaccurately concludes that “[i]t would have been obvious to modify the teachings of Kato by using as the glass fabric base, a fabric that is non-degreased as taught by Nagamine, motivated by his teachings that such glass fabric cloths are known in the art and the desirability to improve productivity and production yield.” Office Action at 3. Such statements are conclusory in light of the general teachings of the prior art, from which the Examiner carves out particular combinations in an attempt to obtain the claimed invention.

At best, the references would lead one to try to obtain the claimed invention. In moving from the prior art to the claimed invention, however, one cannot base a determination of obviousness on what the skilled person might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do. In the present case, the prior art, at best, provides general guidance to try

to create a resin-compatible sizing agent for use on a glass fabric that is utilized in prepregs, laminates and electronic supports. Only in hindsight could it have been obvious to one with the cited references before her to have combined their teachings in the claimed manner with a reasonable expectation of success. Examiners, however, may not pick and choose among isolated disclosures in references to defeat patentability of a claimed invention. Such picking and choosing amounts to improper hindsight reconstruction, and is prohibited. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q. 2d 1596, 1600 (Fed. Cir. 1988).

As a result, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness, and respectfully request that the § 103 rejections of independent claims 1 and 40 be withdrawn.

B. Claims 18 and 47

Regarding claims 18 and 47¹, it is the Examiner's position that the property of loss on ignition is "inherent" in the Kato reference because Kato teaches a coating that is compatible with the matrix material. Office Action at 3. Applicants respectfully traverse this rejection for at least the reasons set forth below.

Applicants respectfully submit that the rejected claims are patentably distinguishable from the prior art. In response to the Examiner's assertion that the loss on ignition property, although not mentioned specifically in the prior art, is in fact "inherent," Applicants submit that loss on ignition is a fluid property, one that can exhibit

¹ Applicants focus solely on the element of "loss on ignition (LOI)" in claims 18 and 47. Other elements contained within claims 18 and 47, such as "air permeability," have not been addressed by the Examiner in the current Office Action.

variation among diverse types of materials. As a result of this potential variability, Applicants point out that the Examiner has not effectively asserted a valid argument by simply stating that a "coating that is compatible with a matrix material" will necessarily have a similar loss on ignition to another resin compatible coating. Indeed, the Federal Circuit has explained, as detailed in the reply to the Office Action dated October 23, 2002, that "[i]nherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Continental Can Co. USA, Inc. v. Monsanto Co.*, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991); M.P.E.P. § 2112 ("[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.") (emphasis added).

When asserting inherency, it is the Examiner's burden to provide factual and technical grounds establishing that the claimed feature necessarily flows from the teachings of the prior art. See *Ex Parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990). The burden to rebut shifts to Applicants only after the Examiner has established inherency by presenting these factual and technical grounds. *In re Best*, 195 U.S.P.Q. 430, 433 (C.C.P.A. 1977). The Examiner has offered neither a factual nor a technical basis for the assertion, for example, that Kato "inherently" teaches the loss on ignition value recited in dependent claims 18 and 47.

Moreover, in the context of a rejection under § 103, the reliance on inherency is improper. As stated by the Federal Circuit, that which is inherent in the prior art, if not known at the time of the invention, cannot form a proper basis for rejecting the claimed invention as obvious under § 103. See *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753,

756-57 (C.C.P.A. 1977). Quoting from *In re Spormann*, 363 F.2d 444, 448, 150

U.S.P.Q. 449, 452 (C.C.P.A. 1966), the court stated:

[T]he inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown.

In re Shetty, 566 F.2d at 86, 195 U.S.P.Q. at 757. Thus, Applicants respectfully submit the Examiner's reliance on inherency in the outstanding rejection under § 103 is improper.

V. Rejection Under 35 U.S.C. § 103(a) over Kato in view of Nagamine and Adolfovna

Claims 2-3, 5, 12-17, 19-20, and 41-46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication No. 3-115,332 ("Kato") in view of Japanese Patent Publication No. 1-249333 ("Nagamine") and Russian Patent Publication No. 2072121 ("Adolfovna") for reasons discussed at page 4 of the Office Action. Applicants respectfully traverse this rejection for at least the reasons that follow.

Applicants respectfully submit that the rejected dependent claims are patentably distinguishable from the prior art for the reasons set forth above. Additionally, Applicants submit that the support cited by the Examiner, taken alone or in combination, has not (1) suggested to or provided motivation for one of ordinary skill in the art to make the combination alleged by the Examiner; or (2) provided one of ordinary skill with a reasonable expectation of success in so making. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)); see also M.P.E.P. §2143.

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Specifically, the Examiner has failed to demonstrate a suggestion or motivation for modifying the teachings of Adolfovna, Kato, and Nagamine, to arrive at claims 2-3, 5, 12-17, 19-20, and 41-46 of the present invention. For example, the Examiner states that "Adolfovna teaches that the binder can be polyimide binder or epoxy binder and that the powder has a particle size of 0.5-2.0 m [sic]" Office Action at page 4. Furthermore, the Examiner asserts that "Nagamine teaches the incorporation of resin reactive diluents in his coating composition." *Id.* These disclosures, however, are far from the objective reasoning that is necessary when asserting obviousness from prior art and certainly does not meet the "clear and particular" standard required by the Federal Circuit. *In re Dembiczak*, 175 F3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Indeed, the Examiner has failed to point to any teaching, suggestion, or incentive that would lead to Applicants' claimed invention; instead simply asserting minor components of the Adolfovna and the Nagamine references. As a result, the rejection fails because it does not demonstrate a suggestion or motivation to combine and modify the teachings of the prior art in the manner suggested by the Examiner.

With respect to the rejection of claims 12 and 13, the Examiner states, in relevant part, that it is "inherent" that the particles taught by Adolfovna have the same properties as those in the presently claimed invention because "the same particles necessarily have the same properties." Office Action at page 4. As emphasized above, however, the reliance of inherency in a rejection under § 103 is improper.

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VI. Conclusion


In view of the foregoing amendment remarks, Applicants respectfully submit that the present application is not obvious in view of the references cited against it. Applicants respectfully request the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: September 8, 2003

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